

## Abstract

This invention addresses the need for dealing with complex planning calculations based on data warehouse or Planning Data Repository (PDR) data where some aggregated data or forecast data might be changed without directly manipulating the underlying data, and where there may be several relationships linking the data. The system is able to deal with complex relationships along more than one axis or dimension. A number of iterations are typically used involving both back-solving and 'forward-solving'. The subset of cells that needs to be recalculated is identified before steps of back-solving and/or forward-solving using parent/child tables. The scanning of these tables looking for potential dependencies is much simpler and faster than to looking at the actual formulae or functions relating the cells. The step of creating the parent/child tables is carried out in advance of the actual calculation by parsing all the relationships (formulae and functions) and summarising the dependencies between cells in the parent/child tables.